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 TI Association of beta2-adrenoceptor Gln27Glu variant with body weight but not hypertension.
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 AB Beta2-adrenoceptor (beta2-ADR)-mediated vasodilatation decreases vascular reactivity and blood pressure (BP) and chromosome 5 where its gene (ADRB2R) resides and shows linkage to hypertension (HT). A Gln27Glu ADRB2R variant confers resistance to agonist-induced desensitization and enhanced vasodilator response to isoprenaline. Therefore, we carried out a case-control study in a cohort of HT and normotensive (NT) Anglo-Celtic Australian white subjects whose parents had a similar BP status as the subjects. Glu27 frequency was 0.41 in 108 HT and 0.42 in 141 NT ($\chi^2 = 0.05$, $P = .82$). Within the HT group, the Glu27 **allele** was more prevalent in 61 subjects who were overweight (body mass index [BMI] ≥ 25 kg/m²) compared with 41 who were lean (BMI < 25 kg/m²); ie, 0.49 v 0.31, respectively ($\chi^2 = 6.4$, $P = .012$). Furthermore, Glu27 tracked with elevation in BMI in these subjects: 24 \pm 4 kg/m², 27 \pm 5 kg/m², and 28 \pm 5 kg/m² for Gln/Gln, Gln/Glu, and Glu/Glu, respectively ($P = .0058$ by one-way ANOVA). Thus, the Gln27Glu beta2-ADR variant is excluded in HT, but might influence body weight.